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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,713	02/07/2006	Kiyoyuki Masuzawa	1002.104	4031

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EXAMINER	
NGUYEN, THUKHANH T	
ART UNIT	PAPER NUMBER
1747	

MAIL DATE	DELIVERY MODE
11/09/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,713	MASUZAWA ET AL.	
	Examiner	Art Unit	
	Thu Khanh T. Nguyen	1747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/04/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (instant specification, pages 1& 2) in view of Sagawa et al (US 5,672,363), Boros et al (4,795,125) and Kotzab (5,772,933).

The admitted prior art discloses it is known in the art to produce sintered ferrite magnets by compression molding in a magnet field. The admitted prior art also discloses that wet processes are known wherein a heated slurry is injected into a compression die (instant specification, pages 1 & 2). It's also known in the art to provide magnetic field and compression in these processes as shown for example by Sagawa et al (col. 1, line 55 to col. 2, line 38). Sagawa et al also notes the wet process produces better orientation (col. 2, lines 29-30).

However, the admitted prior art does not disclose a die with a plurality of cavities, a unit for controlling the temperature of the die and a heater holding mechanism provided along the delivery path to hold the heater for heating the die.

It is conventional in the art to provide multiple cavities in a die as a means to increase efficiency and throughput. Furthermore, it is also known in the art to provide temperature control in such multicavity dies. For examples, Boros et al disclose an injection molding apparatus, comprising a plurality of mold cavities (62) in a die plate (37/II) and a plurality of

injection nozzles (96) supported by a mold plate (37/III) to inject the molding material into the mold cavities (62), wherein the support mold plate (37/III) also comprises a plurality of fluid conduits (76) located along a delivery path of the material within the nozzles for conducting heating fluid to heat the die plate (37/II; col. 6, lines 62-65).

Kotzab discloses an injecting mold, comprising a plurality of heating conduits (10-13 & K1, K2) along a delivery path (7) for heating the molding die (3) and a controller (15) for controlling the quantity of heating fluid distributed into the heating conduits.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the admitted prior art by providing a temperature control system for a plurality of molding dies as taught by Boros et al and a temperature controller as taught by Kotzab in order to improve the temperature controlling and the molding process.

Regarding claims 4-5, the admitted prior art indicates that the slurry is heated in the range of 40-90°C. Sagawa et al notes that the green compacts are cured at 120°C after pressing (col. 36, lines 23-26). One applying the teachings of Boros et al or Kotzab to the processed of the admitted prior art would appreciate providing a heater that can operate in the range of 40-120°C so that the suggested temperatures can be provided.

Regarding claim 6, wherein the delivery path, or the hot runner in Kotzab (7) or Boros et al (26, 95, 96) seems to have a volume at least the same as the slurry volume to be injected into the molding dies.

Regarding claim 7, wherein the Boros et al is capable of uniformly heating the die via plurality of heating conduits (col. 1, lines 53-57).

3. Applicant's arguments with respect to claims 1, 4-7 have been considered but are moot in view of the new ground(s) of rejection.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is (571) 272-1136. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN

/Richard Crispino/
Supervisory Patent Examiner, Art Unit 1747